

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/DE 03/00932

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 F16B39/24 F16B43/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F16B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 332 464 A (LOUIS CASTEL GERARD ANTOINE) 25 July 1967 (1967-07-25)	1-4
Y	column 3, line 51 - column 4, line 40; figures 1-3 column 4, line 61 - line 75; figures 6,7	5-7
X	DE 11 29 779 B (ADOLF SCHNORR K G) 17 May 1962 (1962-05-17)	1,2,5
Y	column 3, line 39 - column 4, line 2; figures 1,2	5-7
X	US 302 441 A (FRANK F STEVENS) 22 July 1884 (1884-07-22) page 1, line 28 - line 72; figures 1-3	1,5
X	US 3 390 713 A (GUTSHALL CHARLES E) 2 July 1968 (1968-07-02) column 2, line 10 - line 59; figures 1,3,4	1
	--- -/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*&\* document member of the same patent family

Date of the actual completion of the international search

25 June 2003

Date of mailing of the international search report

04/07/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Heinzler-Rödl, M

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 426 895 B (BAUER & SCHAURTE KARCHER GMBH) 18 August 1993 (1993-08-18) cited in the application column 2, line 29 -column 3, line 35; figure 1 -----	1-7

## INTERNATIONAL SEARCH REPORT

Information on patent family members

Application No

PCT/DE 03/00932

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3332464	A	25-07-1967	FR 1300835 A	10-08-1962
			DE 1400872 A1	14-05-1970
			GB 1006551 A	06-10-1965
DE 1129779	B	17-05-1962	CH 367012 A	31-01-1963
US 302441	A		NONE	
US 3390713	A	02-07-1968	NONE	
EP 0426895	B	15-05-1991	EP 0426895 A1	15-05-1991
			AT 93303 T	15-09-1993
			DE 58905334 D1	23-09-1993
			ES 2042940 T3	16-12-1993
			IE 904010 A1	08-05-1991
			PT 8465 U	30-09-1992